BY ORDER OF THE SECRETARY OF THE AIR FORCE

AIR FORCE INSTRUCTION 15-180

28 MAY 1997

Weather

AIR FORCE WEATHER STANDARDIZATION AND EVALUATION PROGRAM

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

OPR: HQ AWS/CVV (Lt Col M. J. Stanley)

Certified by: HQ USAF/XOW (Brig Gen T. J. Lennon)

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This instruction implements AFPD 15-1, *Atmosphere and Space Environmental Support* and reflects AFDD45, *Aerospace Weather Operations*. It provides guidance and procedures for conducting the evaluation of Air Force Weather (AFW) technical proficiency and compliance with HQ USAF weather standards. It outlines the frequency of evaluations, responsibilities of the HQ AWS evaluation team members, and reporting format. It defines the method of computing a conformity index which depicts an indication of compliance with AFW policies and standards. This instruction requires the collection and maintenance of information protected by the Privacy Act of 1974. The authority to collect and maintain the records prescribed in this instruction is Title 10, US Code, Section 8013. Privacy Act system of records notice F035 AFMPC applies. This instruction applies to all USAF active duty, Air Force Reserve, and Air National Guard weather units when mobilized. Send comments and suggested improvements on AF Form 847, Recommendation for Change of Publication, through channels, to HQ AWS/CVV, 102 West Losey Street, Scott AFB IL 62225-5206. Major commands (MAJCOM) and direct reporting units (DRU) may supplement this instruction. If supplemented, MAJCOMs and DRUs will send one copy of their supplement to HQ AWS/CVV.

SUMMARY OF REVISIONS

This interim change (IC) 97-1 lowers the AFWSEP conformity index (CI) score for an "Exceptionally Qualified" (EQ) rating from 95 to 90.

1. Air Force Weather Standardization and Evaluation Program (AFWSEP). The AFWSEP evaluates the ability of USAF weather units to meet weather standards and the weather forecasting and observing requirements of their customers. The AFWSEP consists of the Air Force Weather Proficiency and Upgrade Program (AFWPUP) and Air Force Weather Technical Standardization and Evaluation

(AFWTSE) program. All US Air Force, Air Force Reserve, and Air National Guard weather units are subject to this program.

1.1. Objectives. Evaluate and standardize weather products and services provided to users and evaluate compliance with AFW technical standards. Develop reports and provide guidance concerning trend information and system improvements. Provide operational commanders, MAJCOM functional managers and command meteorologists (CM)/weather unit leaders with an objective assessment of the technical health of their units. Assist commanders in measuring compliance with USAF policy. Ensure standardization through measurement, benchmarking and crossflow of information.

1.2. Scope. Analyze and evaluate all pertinent weather technical areas which are a part of or directly affect AFW.

2. Air Force Weather Proficiency and Upgrade Program (AFWPUP). AFWPUP is the program to be used by weather units to initially certify and annually recertify unit personnel for duty in the weather station.

2.1. Program Administration. The CM/weather unit leader is responsible for administering this program. AFWPUP consists of a written proficiency test and an operational checkride. Checkrides will evaluate the individual's ability to perform weather tasks expected to be encountered while the individual is on duty. Due to practical considerations, checkrides are not required to be so comprehensive that they encompass every possible task.

2.1.1. Prior to performing observing functions or upgrading to analyst, able forecaster, weather manager, chief of weather station operations (CWSO), operational meteorologist (OM), instructor meteorologist (IM), or CM, an individual must pass a written upgrade test and a checkride.

2.1.2. Individuals arriving for permanent assignment at a unit will undergo AFWPUP testing and a checkride prior to certification for duty.

2.1.3. Individuals who are temporarily assigned to a station (during contingencies, exercises, or TDY augmentation for example) are not required to undergo AFWPUP at the temporary location.

2.1.4. Each individual will undergo AFWPUP testing and a checkride annually in the anniversary month of their last AFWPUP certification. At the discretion of the CM/weather unit leader, written testing and checkrides for individuals conducted by HQ AWS/CVV during AFWTSE visits may be used to fulfill this requirement.

2.1.5. AFWPUP testing and checkrides for the CM will be administered by the IM or CWSO. Additionally, the CM will be tested by the AFWTSE team chief during AFWTSE visits.

2.1.6. Occasionally, circumstances such as personnel shortages, contingencies, or other factors will preclude AFWPUP testing prior to an individual performing routine weather duties while not under the supervision of a certified trainer. The CM/weather unit leader may waive AFWPUP certification requirements until the situation is resolved. These instances should be held to an absolute minimum. When waivers are necessary, the CM/weather unit leader will document the situation in a memorandum to the unit's commanding officer. Units will keep a copy of each waiver letter for AFWTSE team review if these waivers extend into an AFWTSE visit period.

2.1.7. AFWPUP certifications will be documented in a memorandum or other document kept on file at the unit. Format is at unit discretion, but will show the date the individual was tested and

items covered. MAJCOMs may develop their own documentation requirements which will satisfy this requirement. Local forms will not be developed for documenting checklists, tests, or reports.

2.2. Test Development. HQ AWS/CVV is the OPR for development of testing materials used in the AFWPUP.

2.2.1. Test materials will be coordinated with 334th Training Squadron (AETC) to ensure compatibility with current AFW formal course curricula and specialty training standards.

2.2.2. HQ AWS/CVV will distribute written test materials to MAJCOMs who will then provide units with those test materials.

3. Air Force Weather Technical Standardization and Evaluation (AFWTSE). The AFWTSE is compliance oriented. The AFWTSE will be conducted using AF checklists developed by HQ AWS/CVV. Coordination of checklists is discussed in paragraph **3.9.**

3.1. Objective. Ensure weather unit adherence to technical standards.

3.2. Scope. Detailed evaluation checklists are used that include items in each major area. Checklists are used to prepare for and conduct the evaluation. The evaluation checklists are comprehensive and make reference to a wide range of directives. HQ AWS/CVV is responsible for updating and maintaining the evaluation checklists. MAJCOMs will forward recommendations for changes to checklist items to HQ AWS/CVV. MAJCOMs are responsible for developing any additional checklists to evaluate individual MAJCOM policies and standards.

3.3. AFWTSE Team Composition. AFWTSE team membership will normally consist of4 personnel plus a MAJCOM representative. The size of the team may be adjusted based on the mission and the size of the unit visited. MAJCOM representatives will be fully integrated into the evaluation team process. Team members will be responsible for the briefings, checklists, and reports. They will also develop and administer proficiency tests, give checkrides, and run checklists during visits. MAJCOM representatives will share duties with the rest of the team as well as focus in on MAJCOM-specific items.

3.4. Scheduling Evaluations.

3.4.1. After prior coordination with MAJCOMs, HQ AWS/CVV will forward a copy of the annual AFWTSE schedule to HQ USAF/XOW and MAJCOM/DOWs. HQ AWS/CVV will update this schedule quarterly ensuring a 12-month schedule is always in place. HQ AWS/CVV will evaluate all field units at least once every 24 months. Waiver requests due to valid mission requirements will be submitted to HQ AWS/CVV.

3.4.2. HQ AWS will notify the OG/CC (or ASOG/CC) of the scheduled evaluation not later than 45 days prior to the event. This correspondence will include weather flight/unit responsibilities and a request for locally identified items requiring evaluation. The CM/unit leader will acknowledge receipt and advise HQ AWS of any tasking which cannot be met not later than 10 days prior to the scheduled evaluation date.

3.5. Inbrief.

3.5.1. The OG/CC (or ASOG/CC) or designee will be inbriefed by the team chief on the visit's purpose and procedures.

3.5.2. The weather unit's command meteorologist will present a formalized briefing to the standardization and evaluation team. The briefing will consist of unit's mission, customers, key personnel, schedules, and personnel qualification status.

3.6. Daily Brief. The AFWTSE team chief will brief the OSS/CC, ASOS/CC, or WS/CC and CM/ unit leader or designated representative daily on the progress of the evaluation.

3.7. Debrief. The AFWTSE team chief will brief the OG/CC (or ASOG/CC) or designee on the results of the visit and leave a final copy of the AFWTSE report.

3.8. Unit Evaluation. Unit evaluations will be completed using the procedures and definitions located in **Attachment 3**. The AFWTSE team will complete AF Form 3983 when calculating the ratings to ensure proper scoring of the unit. A rating index (RI) will be determined for both the operational and proficiency areas. The RI for the operational area is determined by dividing the number of points earned divided by the total available points. The RI for the proficiency area is determined by dividing the sum of the test scores by the total number of personnel tested. An operational rating index (OP-RI) will be based on the operational RI and a weighting factor (70%). A proficiency rating index (PR-RI) will be based on the proficiency RI and a weighting factor (30%). The OP-RI and PR-RI will be totaled to determine the conformity index (CI), which indicates overall adherence to standards (see **4.4.**). Discrepancy areas will be addressed as described in **Attachment 2**. Appropriate reference(s) will be listed for each area indicated as a discrepancy. The CI will be used to determine the unit rating: Exceptionally Qualified (EQ), Qualified (Q1), Qualified with additional training required (Q2), and Unqualified (Q3). An area having an operational impact may be addressed as an observation if it is not included on the checklists, but it will not be included when computing the CI.

Table 1. Determining Unit Rating.

Determining the unit rating		
The rating is:	if:	and:
EQ Exceptionally Qualified	CI ≥ 90	no sub-area rated 0, 1, or 2
Q1 Qualified	CI ≥ 80 but < 90	no sub-area rated 0, 1, or 2
Q2 Qualified with additional training required	CI ≥ 60	
Q3 Unqualified	CI < 60	

3.8.1. Major Evaluation Areas. Evaluators will use the AFWTSE checklists to determine unit compliance with Air Force directives and weather interest items/special interest items (see paragraph **5.3.**). MAJCOM evaluators can supplement the HQ AWS/CVV checklist as they see fit to determine unit compliance with MAJCOM specific directives. The following are evaluation areas and associated weighted percentages:

3.8.1.1. Operational Area (OR). Individual task evaluations/checkrides/checklist items: (70 percent).

3.8.1.1.1. Individuals will be administered checkrides during the visit. If no significant weather is present, preventing a realistic evaluation, the evaluation will be done using sce-

nario-based exercises. These exercises will not conflict with real-time mission tasks.

3.8.1.2. Proficiency Area (PR). Written proficiency tests: (30 percent).

3.8.1.2.1. Written tests will be issued, collected, and graded by evaluation team members. During the visit, tests will be administered to the CM/weather unit leader, Chief of Weather Station Operations, and all available apprentices, analysts, and able forecasters. MAJCOMs may augment this program by developing/issuing tests to evaluate MAJCOM or local knowledge areas. A list of the questions missed and how often they were missed will be evaluated by HQ AWS/CVV for trend analysis to identify areas requiring emphasis, and to determine the adequacy of training products and AF-level guidance. The results will not be tracked by individual, only by overall trends.

3.8.2. Follow-up Evaluations. MAJCOMs may conduct follow-up evaluations to assess the unit's progress in correcting discrepancies identified during the most recent AFWTSE.

3.9. Evaluation Checklists. HQ AWS/CVV is the OPR for development of AFWTSE checklists.

3.9.1. Coordination Procedures. HQ AWS/CVV will coordinate AFWTSE checklists with HQ USAF/XOWP and MAJCOM weather staffs prior to use.

3.9.2. Checklist Publication. After coordination is complete, HQ AWS/CVV will publish and disseminate the checklists to MAJCOMs. MAJCOMs are responsible for disseminating the checklists to subordinate units. The checklists will also be available for download via the AFW bulletin board. Checklists will be sent to the MAJCOMs at least 60 days prior to their effective date.

4. Indices.

4.1. Rating Index (RI).

4.1.1. For the operational area: the ratio of points earned divided by the total available points.

4.1.2. For the proficiency area: the ratio of the sum of the test scores divided by the number of individuals tested.

4.2. Operational Rating Index (OP-RI). The RI of the operational area multiplied by the weighting factor of 70%.

4.3. Proficiency Rating Index (PR-RI). The RI of the proficiency area multiplied by the weighting factor of 30%.

4.4. Conformity Index (CI). The sum of the OP-RI and the PR-RI equals the CI. The CI is used to determine the unit's qualified or unqualified status. The numbers used to compute the CI also identify trends within specific evaluation areas for use in targeting Air Force wide training efforts. See paragraph **3.8.** for breakdown of ratings.

5. Air Force Weather Technical Standardization and Evaluation (AFWTSE) Report. The results of all evaluations are promptly reported to the OG/CC (or ASOG/CC), OSS/CC (or ASOS/CC), and command meteorologist.

5.1. Responsibilities.

5.1.1. USAF/XOW Responsibilities. Develop policy, publish guidance and directives in a timely manner, and identify and program for resources needed to execute program.

5.1.2. HQ AWS Responsibilities. Provide manpower for evaluation teams, fund TDY travel of teams, and develop checklists based on published USAF policy and provide copies to MAJCOMs. The evaluation team members will prepare a report for each evaluation using the format shown in **Attachment 2**. The AFWTSE report must be completed prior to departure from the base/post weather station being evaluated. The AFWTSE team will also transmit a message to HQ USAF/XOW, HQ AWS/CC, and all MAJCOMs, outlining the results of the evaluation prior to departure from the evaluated base/post weather station. Hard copies of the report will be distributed to all MAJCOMs within 15 workdays following completion of the visit.

5.1.2.1. Develop and coordinate all checklists and testing materials as outlined in paragraphs **2.1.**and **3.9.**

5.1.2.2. Include all sections and subsections in the report. Indicate if there is no information for a section.

5.1.2.3. Mark all reports "FOR OFFICIAL USE ONLY" and handle accordingly. AFWTSE reports are exempt from RCS licensing in accordance with AFI 37-124, *The Information Collection and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections.*

5.1.2.4. Do not use technical jargon other than equipment nomenclature followed by the equipment type/name. The report must be written to and for operational echelons not familiar with weather language.

5.1.2.5. Provide an annual Air Force Weather Standardization and Evaluation Program (AFWSEP) report to MAJCOMs and HQ USAF/XOW. The report identifies trends, both positive and negative. This report is designated emergency status code C-2; continue reporting during emergency conditions, normal. Do not report by message during MINIMIZE.

5.1.2.6. Provide an annual schedule of AFWTSE visits to the MAJCOM/DOW and HQ USAF/XOW.

5.1.3. MAJCOM Responsibilities. Implement USAF policy, identify and program for resources needed to execute policy, identify resource shortfalls to HQ USAF for resolution, assist base/post weather units in identifying and correcting discrepancies, provide copies of evaluation checklists and AFWTSE reports to units, and augment evaluation teams as requested. MAJCOM representatives will also prepare a separate report as required in accordance with MAJCOM directives.

5.1.4. OG/CC (or ASOG/CC) Responsibilities. The OG/CC (or ASOG/CC) resolves any issues identified in the report that they are responsible for.

5.1.5. Weather Flights/Units Responsibilities. Implement USAF policy, directives, and guidance. Administer the AFWPUP. Identify discrepancies and shortfalls which are beyond local resolution to their MAJCOM.

5.2. Report Format Section I.

5.2.1. Purpose and Scope. The evaluation report provides all management levels with a detailed account of how each weather unit conforms to Air Force standards and how personnel perform their duties.

5.2.2. Air Force Weather Setting. Briefly describe the mission supported, including units and types of aircraft if applicable. List and comment on support generated from adjacent airfields and its impact on unit operations. Also, list any unique operational requirements supported by the weather unit.

5.2.3. Executive Summary. An Executive Summary is written to give the host operational commander a short preview of the AFWTSE team's assessment of the weather unit's capability to support the customer's mission. Limit this section to a single page if possible. Remarks should include the CI and comments relative to Special Interest Items (SII). Annotate each SII identified, and briefly describe results.List items not appropriate as observations or discrepancies. Examples of these are limitations or proposals that the OG/CC (or ASOG/CC) can not resolve or items that are beyond the host operational commander's jurisdiction.

5.3. Report Format Section II, Weather Interest Items (WIIs)/Special Interest Items (SIIs). HQ USAF/XOW, HQ AWS/CC or MAJCOMs identify WIIs/SIIs to be included during evaluations. Organizations may request that site specific items be assessed. Requests for WII/SII evaluation must contain the requested item, the effective date for assessment, and the cancellation date. The supporting documentation and/or regulation defining the requirement should also be identified. Weather Interest Items/Special Interest Items remain in effect for no more than 6 months. Locally identified, site specific items will be identified for that base/post only. Any long term requirement will be incorporated into the AFWTSE checklist. Crucial items identified through HQ USAF, HQ AWS, or MAJCOM channels must be disseminated expeditiously on a case-by-case basis.

5.4. Report Format Section III, Observations.

5.4.1. Observations. Each observation has an associated discussion and recommendation section as defined below. Include only those observations which may have an operational impact on Air Force Weather users. Observations clearly state the item and the impact.

5.4.1.1. Observation. Briefly describe the observation. Observations are procedures, programs, or methods which affect flight safety, impact operations, or have the potential to affect the mission and/or flight safety. Observations are non-checklist items and may be positive or negative. Do not include non-operational deviations as observations. Brief these deviations to the personnel/office responsible for resolution.

5.4.1.2. Discussion. Describe the observation, why it is an observation, background information, and any past history of the same or a similar observation the unit may have previously experienced.

5.4.1.3. Recommendation. Suggested course(s) of action. Recommendation(s) must be reasonable and within the scope of the evaluation.

5.5. Report Format Section IV, AFWTSE Results.

5.5.1. Operations.

5.5.1.1. Discrepancy. Briefly describe the discrepancy and list the reference. Discrepancies are areas identified that are in violation of Air Force, MAJCOM or facility directives, as well as references that are non-directive in nature and negatively affect performance, programs, or quality of service. Discrepancies identified that are Air Force or MAJCOM in scope and require resolution above the unit level shall not be used in determining the conformity index for the unit, provided the unit has identified these discrepancies. Recurring discrepancies are

referred to a higher level, i.e., MAJCOM, to ensure corrective actions and compliance with regulations. Recurring discrepancies appear in each subsequent evaluation until corrected.

5.5.1.2. Discussion. Describe the discrepancy, why it is a discrepancy, background information, and any history of the same or similar discrepancy.

5.5.1.3. Recommendation. Suggested course(s) of action. Recommendation(s) must be reasonable and within the scope of the evaluation.

5.5.2. Proficiency. Provide the written proficiency test results using Q ratings.

5.5.3. Checkrides. Provide results of checkrides administered using Q ratings and categories tested.

5.5.4. Weather Interest Items/Special Interest Items. An evaluation of all HQ USAF/XOW, HQ AWS/CC, MAJCOM, or locally identified WIIs/SIIs pertaining to the unit will be provided.

5.5.5. Exceptional Performers. List exceptional performers and a brief description of the action.

5.5.6. Overall Rating. The unit rating will be computed based on the conformity index as described in **Attachment 3**.

5.6. Report Format Section V, General Information.

5.6.1. Air Force Weather Equipment and Configuration. List existing weather equipment and components. List active/future AFW system programs.

5.6.2. Key Individuals Contacted. Include as a minimum, name, rank, and organization/office symbol.

5.6.3. Distribution. List all agencies/offices to receive copies of the report. Include number of copies to be sent. See example in **Attachment 2**.

6. Forms Prescribed. AF Form 3983, **Air Force Weather Technical Standardization and Evaluation (AFWTSE) Worksheet.**

JOHN P. JUMPER, Lt General, USAF
DCS/Air and Space Operations

Attachment 1

GLOSSARY OF REFERENCES, ABBREVIATIONS, ACRONYMS, AND TERMS

References

AFPD 15-1, *Atmospheric and Space Environmental Support*

AFDD 45, *Aerospace Weather Operations*

AFI 37-124, *The Information Collection and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*

Abbreviations and Acronyms

AFW—Air Force Weather

AFWPUP—Air Force Weather Proficiency and Upgrade Program

AFWSEP—Air Force Weather Standardization and Evaluation Program

AFWTSE—Air Force Weather Technical Standardization and Evaluation

AWDS—Automated Weather Distribution System

CI—Conformity Index

CM—Command Meteorologist

CWSO—Chief of Weather Station Operations

DRU—Direct Reporting Unit

EQ—Exceptionally Qualified

FOA—Field Operating Agency

IAW—In Accordance With

IM—Instructor Meteorologist

MAJCOM—Major Command

NEXRAD—Next Generation Weather Radar (WSR-88D)

OG—Operations Group

OM—Operational Meteorologist

OP-RI—Operational Rating Index

PR-RI—Proficiency Rating Index

Q1—Qualified

Q2—Qualified with additional training required

Q3—Unqualified

RI—Rating Index

STS—Specialty Training Standard

TDY—Temporary Duty

TFRN—Terminal Forecast Reference Notebook

WII/SII—Weather Interest Item/Special Interest Item

Terms

Conformity Index—The sum of the OP-RI and the PR-RI equals the CI.

Operational Rating Index—The rating index in the operational area multiplied by the weighting factor of 70%.

Proficiency Rated Index—The rating index in the proficiency area multiplied by the weighting factor of 30%.

Rating Index—Computed for both the operational area (points earned divided by total available points) and the proficiency area (sum of the test scores divided by the number of personnel tested).

Weather Interest Item/Special Interest Item—A specific issue or item identified by HQ USAF/XOW, HQ AWS/CC, or MAJCOMs which requires separate evaluation at the unit. Typically, these items are class discrepancies or observations which are identified by the MAJCOM or USAF Inspector General.

Attachment 2

AFWTSE SAMPLE REPORT

FOR OFFICIAL USE ONLY

UNITED STATES AIR FORCE

AIR FORCE WEATHER

TECHNICAL STANDARDIZATION

AND EVALUATION

PROGRAM

REPORT

Blank AFB, February 1996

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FOR OFFICIAL USE ONLY

SECTION I

PURPOSE AND SCOPE: This evaluation was conducted to provide an assessment of the quality and adequacy of AFW technical support for operations at Blank AFB. The results of the evaluation are based on compliance with USAF standards, as well as local, MAJCOM, and USAF procedural policy/guidance. It includes an evaluation of the unit's technical capability and procedures.

AFW SETTING: Blank AFB is the home of the 999th Fighter Wing. Aircraft assigned are F-15Cs and F-15Es, along with KC-135Rs and T-38s. The Blank2 AFB is located within Blank AFB airspace and Blank weather unit provides support after limited duty hours for Blank2.

EXECUTIVE SUMMARY: A comprehensive AFWTSE was performed on weather operations IAW AFI 15-179. The weather unit is providing excellent service to the flying organizations at Blank AFB. The mix of differing climatological regimes at this location presents continuous forecast challenges. Weather flight leaders have implemented several quality and technical initiatives to provide timely, accurate, and dedicated weather support to these customers. Based on evaluation of technical capabilities, the weather unit is rated as Qualified (Q1).

Observations and discrepancies identified during the visit are explained in Sections III and IV. No observations or discrepancies were noted in the WII/SII areas.

SECTION II - WEATHER INTEREST ITEMS/SPECIAL INTEREST ITEMS

None identified.

SECTION III - OBSERVATIONS:

(1) OBSERVATION: Visibility Marker Aids

DISCUSSION: Several minor problems exist with visibility aids at both the ROS and Blank Field. Specifically, visibility photos in the ROS didn't reference the heights of known landmarks, didn't identify nighttime markers (they were labeled on the ROS windows), or reference the direction on the photo. The primary and alternate observing visibility aids at Blank Field reference different heights for known landmarks, and do not include approximately five markers that could be used. These additional markers would significantly improve the observers ability to determine visibility. The lack of identified visibility markers could cause inaccurate observations being provided to the customer, impacting flight operations.

RECOMMENDATION: Update and consolidate existing visibility aids for both locations.

(2) OBSERVATION: Forecast Continuity

DISCUSSION: We did not observe continuity between forecasts, forecasters and staff briefers. It was not apparent that adjustments in forecast reasoning between forecasts was adequately conveyed, particularly for the longer range portion of the forecasts. During checkrides, forecast weather parameters changed several times but the breaks in continuity between forecasts were not thoroughly explained during forecast discussions, shift change briefings or annotated on forecast worksheets. Emphasizing these changes helps provide a clearer picture about how the forecaster believes the atmosphere is changing and what the key ingredients to the forecast are. This can prevent radical changes from forecast to forecast and provide a more stable and accurate picture of expected conditions to decision makers using weather to plan activities.

RECOMMENDATION: Station leadership should emphasize the importance of forecast continuity. Consider adding an area to the forecast worksheet to help forecasters focus on continuity.

(3) POSITIVE OBSERVATION: AWDS Program Management

DISCUSSION: The AWDS system management program is superb! During the checkride, the system manager displayed an in-depth knowledge of system operations. She has developed detailed, concise flowcharts to aid in daily use and troubleshooting of this complex system which allows forecasters to maximize use and minimize downtime through quick corrective actions. The training program is thorough enough to teach personnel about the simplest tasks through complex system management tasks. The manager's continuity binder is very well organized and encompasses the full range of information needed to run the system. It should help provide a seamless transition between the current system manager who is PCSing and the assistant she has just trained in.

SECTION IV - AFWTSE RESULTS:

1. Operations

19 Operational Areas were evaluated, 7 areas had discrepancies noted.

(1) DISCREPANCY AREA: Take Observations (AFMAN 15-125, para 1.5.1) (3 points)

DISCUSSION: During checkrides of observing personnel with regards to back-up observing procedures, there were consistent problems in determining accurate weather elements. Observers were unsure of the proper way to use the equipment. It took approximately 25-35 minutes to take an observation, which with a changing weather pattern, would not allow time to keep abreast of the current weather conditions. Errors identified included: wind direction reported 180 degrees off and the dewpoint incorrectly calculated. Failure of the primary equipment could result in the airfield not having a current and updated observation, resulting in a flight safety risk.

RECOMMENDATION: Include in the unit operating procedures, more detailed instructions on interpreting weather elements and ensure personnel are proficient in this area as well as more proficient on the use of back-up weather equipment.

(2) DISCREPANCY AREA: METSAT (AFMAN 15-125, para 13.2.1) (2 points)

DISCUSSION: Forecasters were not knowledgeable of the benefits and limitations of available enhancement curves. The use of the enhancement curves allows forecasters to key in on particular weather elements and cloud patterns. This is a valuable source in forecasting the height, types, and area of coverage of cloud patterns. Forecasters also had difficulty in describing how to use the temperature scale on the infrared imagery and placement of significant weather features. Full exploitation of this valuable forecast tool will increase forecast accuracy.

RECOMMENDATION: The unit should ensure forecasters are trained on meteorological satellite interpretation in order to fully exploit the weather.

(3) DISCREPANCY AREA: RADAR (AFMAN 15-125, para 8.5) (2 points)

DISCUSSION: Forecasters were not knowledgeable in the interpretation of all products used in the forecast process. They were not aware of the benefits and limitations of some products (e.g., base and storm relative velocity products, composite reflectivity, vertical cross section products, and mesocyclone verification procedures). A thorough knowledge of the benefits and limitations of these products is essential to accurate interpretation of radar products and their application to the forecast.

RECOMMENDATION: Train personnel on the strengths and weaknesses of all products used in the forecast process. Recommend coordination with AW/XOT for a process review which zeroes in on particular radar related forecast problems (e.g. thunderstorms) in the area of interest.

2. Proficiency

Written proficiency tests were administered to the following individuals with results noted below:

	EQ	Q1	Q2	Q3	Total
CM/OM/IM/ CWSO	3	0	0	0	3
Forecaster	1	4	0	0	5
Observer	1	2	0	0	3

3. Checkrides

Checkrides were accomplished in the following areas with results noted below:

	EQ	Q1	Q2	Q3	Total
AWDS Systems Manager	2	0	0	0	2

Forecasting	1	4	0	0	5
Radar	2	6	0	0	8
Observing	1	2	0	0	3

4. Weather Interest Item/Special Interest Items

No WIIs/SIIs were evaluated, no discrepancies noted.

5. Exceptional Performers

(1) SSgt John F. Smith - SSgt Smith has put together an excellent tactical local analysis and forecast program. He is tactically oriented and ensures unit personnel are fully capable to perform their mobility mission.

(2) A1C John G. Smith - Through his enthusiasm and initiative, A1C Smith noticed a disparity in the active wind sensor and the observed wind conditions. He used a tactical wind measuring device and then immediately informed the forecaster of his current observed conditions.

6. Overall Rating

Q1 - Qualified.

SECTION V - GENERAL INFORMATION:

A. **Weather Equipment and Configuration**

(1) WSR-88D Principal User Processor (PUP)

(2) AN/FMH-2, Automated Weather Distribution System (AWDS)

(3) AN/GMQ-34, Cloud Height System

(4) AN/FMQ-8, Temperature/Dew Point System

(5) AN/FMQ-13, Digital Wind Measuring Set (dual instruments)

(6) Projected equipment improvements: Digital Wind Measuring Set (AN/FMQ-13): Digital wind reading equipment which will replace existing AN/GMQ-11/20 wind systems. Estimated Completion Date (ECD): First quarter of fiscal year (FY) 1996.

B. **Key Individuals Contacted**

(1) Col John A. Smith, XXX Operations Group Commander

(2) Lt Col John B. Smith, XXX Operations Support Squadron Commander

(3) Maj John C. Smith, XXX OSS Weather Flight Commander

(4) MSgt John D. Smith, XXX OSS Weather Flight Station Chief

(5) SSgt John E. Smith, XXX OSS AWDS System Manager

(6) SSgt John F. Smith, XXX OSS WSR-88D Manager

C. **Distribution**

Organization	Copies
OG/CC (or ASOG/CC)	1
OSS/CC	4
HQ USAF/XOW	1
HQ AWS/CC	1
HQ AFMC/DOW	1
HQ AETC/XOSW	1
HQ AMC/DOW	1
HQ PACAF/DOW	1
HQ AFSPC/DOOW	1
HQ ACC/DOW	1
HQ USAFE/DOW	1
HQ AFRES/DOTW	1
HQ AFSOC/DOOW	1
NGB/DOW	1
AFGWC/CC	1
AFCCC/CC	1
AFCWF	1

Attachment 3

WORKSHEET FOR COMPUTING INDICES

1. DEFINITIONS:

a. Rating Index (RI). Each one of 20 sub-areas will be rated 0-5 points. All sub-areas start out at 4 points. The number of points earned in any sub-area is determined by the ratio of the number of correct checklist items divided by the total number of items in the sub-area. A sub-area with no discrepancies does not necessarily equate to 5 points. A rating of 5 points in any sub-area will be reserved for those exceptional areas. Any sub-area rated 0, 1, or 2 will affect the overall rating.

1) Operational Area - The RI for the operational area is determined by dividing the number of points earned divided by the total available points.

2) Proficiency Area - The RI for the proficiency area is determined by dividing the sum of the test scores by the total number of personnel tested.

b. Operational Rating Index (OP-RI) - An operational rating index (OP-RI) will be based on the operational RI and a weighting factor (70%).

c. Proficiency Rating Index (PR-RI) - A proficiency rating index (PR-RI) will be based on the proficiency RI and a weighting factor (30%).

d. Conformity Index (CI) - Sum of the OP-RI and PR-RI. For example, if Blank AFB received an OP-RI of 61.7 and a PR-RI of 25.2, the CI would be:

CI = OP-RI + PR-RI

CI = 61.7 + 25.2

CI = 86.9

This equates to a qualified (Q1) unit rating (assuming no operational sub-area is rated 0, 1, or 2).

EQ Exceptionally Qualified	CI $\geq$ 90	no sub-area rated 0, 1, or 2
Q1 Qualified	CI $\geq$ 80 but < 90	no sub-area rated 0, 1, or 2
Q2 Qualified with additional training required	CI $\geq$ 60	
Q3 Unqualified	CI $\leq$ 60	

Attachment 4

IC 97-1 TO AFI 15-180, AIR FORCE WEATHER STANDARDIZATION AND EVALUATION-PROGRAM (AFWSEP)

SUMMARY OF REVISIONS

This interim change (IC) 97-1 lowers the AFWSEP conformity index (CI) score for an "Exceptionally Qualified" (EQ) rating from 95 to 90.

Table A4.1. Determining Unit Rating.

Determining the unit rating		
The rating is:	if:	and:
EQ Exceptionally Qualified	CI ≥ 90	no sub-area rated 0, 1, or 2
Q1 Qualified	CI ≥ 80 but < 90	no sub-area rated 0, 1, or 2
Q2 Qualified with additional training required	CI ≥ 60	
Q3 Unqualified	CI < 60	

ACTH 3, 1.d. Conformity Index (CI) - Sum of the OP-RI and PR-RI. For example, if Blank AFB received an OP-RI of 61.7 and a PR-RI of 25.2, the CI would be:

CI = OP-RI + PR-RI

CI = 61.7 + 25.2

CI = 86.9

This equates to a qualified (Q1) unit rating (assuming no operational sub-area is rated 0, 1, or 2).

EQ Exceptionally Qualified	CI ≥ 90	no sub-area rated 0, 1, or 2
Q1 Qualified	CI ≥ 80 but < 90	no sub-area rated 0, 1, or 2
Q2 Qualified with additional training required	CI ≥ 60	
Q3 Unqualified	CI ≤ 60	